

of image data stored in the image storage step, in a storage order of the plurality of image data in a second area of the file,

wherein the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.

REMARKS

Claims 1-19 are pending in this application. Claims 1, 7, 13, and 19, the independent claims, have been amended to define still more clearly what Applicants regard as their invention, in terms which distinguish over the art of record.

Claims 1, 4, 5, 7, 10, 11, 13, 16, 17, and 19 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 4,602,333 to Komori in view of U.S. Patent 4,949,287 to Yamaguchi et al; and Claims 2, 3, 6, 8, 9, 12, 14, 15, and 18, as being obvious from Komori and Yamaguchi et al. in view of U.S. Patent 6,078,005 to Kurakake et al.

Claim 1 is directed to an image storage method, including an image storage step of continuously storing a plurality of image data in a first area of a single file. The method also includes a reference information storage step of storing reference information for accessing a source outside the file, which pertains to each of the plurality of image data stored in the image storage step, in a storage order of the plurality of image data in a second area of the file. The reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.

Among the important features of Claim 1 are that the method stores a plurality of image data, and reference information for referencing related external information, into a single file. Furthermore, the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area. By virtue of these features, high-speed access to and easy management of image data may be realized, and higher quality image output can be obtained.

Komori, as understood by Applicants, relates to storage of image data in both original and compressed forms. The image processing apparatus of Komori includes an image data production device, a main memory, a compression circuit, a write circuit, a magnetic disk, a read circuit, an expansion circuit, and an image processing device. The magnetic disk has at least two storage areas. The compressed image data and the non-compressed image data are made from one image data, and the compressed image data has priority over the non-compressed image data in the storage operation of the magnetic disk.

Therefore, Komori discusses a storage of image data which has two separate storage areas for storing compressed image data and non-compressed image data (storage areas A and B in Fig. 9, for example). The image data file shown in Fig. 6B includes compressed image data and non-compressed image data; the image data file does not include reference information. Indeed, the Office Action concedes that "Komori does not teach storing reference information."

The Office Action asserts that Yamaguchi et al. teaches storing reference information. (See pages 2 and 3 of the Office Action.) Yamaguchi, as understood by Applicants, relates to a document processing system which can appropriately lay out text

data and image data which is referred to in the text data, to thereby prepare a document formed of the text and images laid out at appropriate locations in the text. The system includes format-data storage means for storing form data including region-attribute data representing at least an image layout inhibited region in which image data is inhibited from being laid out. The system also includes reference-data storage means for storing reference data representing the relationship between any image-referring part of the text data and image data which is referred to in that image-referring part. Furthermore, a data-layout section is included for laying out the text data and also laying out the image data outside the image-layout inhibited region, according to the region-attribute data stored in the format-data storage means and the reference data stored in the reference-data storage means, to thereby prepare document data.

Fig. 2 of Yamaguchi et al. shows a text document which includes information specifying image data to be linked. However, nothing has been found in Yamaguchi et al. that would teach or suggest storing a plurality of images in a single file, or storing reference information corresponding to each of a plurality of images in the file, the reference information including information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area, as recited in Claim 1.

Accordingly, Claim 1 is believed to be patentable over Komori and Yamaguchi et al., either separately or in combination.

Independent Claims 7, 13, and 19 each correspond to Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.


A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,


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VERSION MARKED TO SHOW CHANGES TO CLAIMS

1. (Amended) An image storage method comprising:

[the] an image storage step of continuously storing a plurality of image data in a first area of a single file; and

[the] a reference information storage step of storing reference information [to] for accessing a source outside the file, which pertains to each of the plurality of image data stored in the image storage step, in a storage order of the plurality of image data in a second area of the file,

wherein the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.

7. (Amended) An image storage apparatus comprising:

image storage means for continuously storing a plurality of image data in a first area of a single file; and

reference information storage means for storing reference information [to] for accessing a source file outside the file, which pertains to each of the plurality of image data stored by said image storage means, in a storage order of the plurality of image data in a second area of the file,

wherein the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.

13. (Amended) A storage medium for storing an image data file, the image data file comprising:

a first area which continuously stores a plurality of image data; and

a second area which stores reference information [to] for accessing a source outside the file, which pertains to each of the plurality of image data stored in the first area, in a storage order of the plurality of image data,

wherein the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.

19. (Amended) A storage medium for storing a control program for making a computer implement generation and storage of an image data file, said control program comprising:

a code of the image storage step of continuously storing a plurality of image data in a first area of a single file; and

a code of the reference information storage step of storing reference information [to] for accessing a source outside the file, which pertains to each of the

plurality of image data stored in the image storage step, in a storage order of the plurality of image data in a second area of the file,

wherein the reference information includes information for accessing image data which is a higher resolution version of the corresponding image data stored in the first area.